What is claimed is:

1. A stethoscope system, comprising:

- a local stethoscope unit including a chest piece assembly to generate a first analog auscultation signal and a local transmitting section to receive the first analog auscultation signal;

- the local transmitting section including a first low frequency boost circuit coupled to the chest piece assembly and capable of amplifying a portion of the first analog auscultation signal having frequencies lower than a predetermined frequency level to generate a boosted segment signal, a local encoder coupled to the chest piece assembly and to the first low frequency boost circuit and responsive to the first analog auscultation signal and the boosted segment signal to generate a compressed digital auscultation signal;

- a data communications channel coupled to the local encoder to receive the digital auscultation signal; and

- a remote stethoscope unit including a remote receiving section and a remote headset, the remote receiving section being coupled to the data communications channel and responsive to the digital auscultation signal to generate a second analog auscultation signal for the remote headset.

2. The stethoscope system according to claim 1, wherein the local encoder has a cut-off frequency and the predetermined frequency level is approximately equal to the cut-off frequency.

3. The stethoscope system according to claim 1, wherein the local stethoscope unit further includes a local headset and a local receiving section; the local receiving section includes a local decoder coupled to the local encoder and responsive to the digital auscultation signal to generate a third analog auscultation signal; and the local receiving section further includes a second low frequency boost circuit and a low pass filter both coupled between the local decoder and the headset.

4. The stethoscope system according to claim 3, wherein the local receiving section further includes a switch having an output coupled to the local headset and being operable to select an input from a diaphragm input terminal or a bell input terminal; the second low frequency boost circuit and low pass filter both being coupled between the bell input terminal and the output of the local decoder; and the output of local decoder being coupled to the diaphragm input terminal.

5. The stethoscope system according to claim 4, wherein the remote stethoscope unit further includes a remote transmitting section coupled to the local receiving section through the data communications channel and being capable of generating a switching signal to control the selection by the switch of either the diaphragm input terminal or the bell input terminal.

6. The stethoscope system according to claim 1, wherein the remote receiving section includes a second low frequency boost circuit and a low pass filter both having the second analog auscultation signal as their input and both having their output coupled to the remote headset.

7. The stethoscope system according to claim 6, wherein the remote receiving section further includes a remote decoder coupled to the data communications channel and responsive to the digital auscultation signal to generate the second analog auscultation signal; a switch having an output coupled to the remote headset and being disposed in switching relationship with a diaphragm input terminal and a bell input terminal; the second low frequency boost circuit and the low pass filter both being coupled between the bell input terminal and the output of the remote decoder; and the output of remote decoder further being coupled to the diaphragm input terminal.

8. The stethoscope system according to claim 1, wherein the local encoder comprises a codec integrated circuit, with the codec integrated circuit having a first operating frequency range and including scaling means for scaling down the first operating

frequency range to provide a second frequency range having a low frequency at least as low as 75 Hz and a high frequency at least as high as 550 Hz.

9. The stethoscope system according to claim 1, wherein the data communications channel is a bandwidth-limited telephone line and the local encoder is an adaptive delta modulation (ADM) and continuously variable slope delta (CVSD) modulation encoder.

10. The stethoscope system according to claim 9, wherein the local transmitting section further includes a local data communications interface coupled between the local encoder and the data communications channel and operable to provide the digital auscultation signal to the data communications channel and the remote receiving section includes a remote data communications interface coupled to the data communications channel to receive the digital auscultation signal, the local and remote data communications interfaces being selectively synchronous or asynchronous.

11. The stethoscope system according to claim 10, wherein the local transmitting section includes a clock system having a clock source and a clock divider coupled to the clock source to generate a line rate clock and a data rate clock; the data communications interface consists of an asynchronous data communications channel interface; and the local transmitting section has a low speed asynchronous line interface rate of 9,600 bits per second driven by the line rate clock and a data rate of 7,680 bits per second driven by the data rate clock.

12. The stethoscope system according to claim 10, wherein the data communications interface includes a synchronous data communications channel interface with a data rate of the digital auscultation signal being equal to a line rate.

13. The stethoscope system according to claim 1, wherein the local stethoscope unit further includes a local receiving section, with the local stethoscope unit having a local transmit mode and a local receive mode; the remote stethoscope unit further including a remote transmitting section, with the remote stethoscope unit having a remote transmit

mode and a remote receive mode; the chest piece assembly being detachably coupled to the local transmitting section; the local stethoscope unit being configured to operate in the local transmit mode and the remote stethoscope unit being configured to operate in the remote receive mode in response the chest piece assembly being coupled to the local transmitting section and not coupled the remote transmitting section.

14. A stethoscope unit, comprising:

- a chest piece assembly to generate a first analog auscultation signal and a transmitting section to receive the first analog auscultation signal; and

- the transmitting section including a first low frequency boost circuit coupled to the chest piece assembly capable of amplifying a portion of the first analog auscultation signal having frequencies lower than a predetermined frequency level to generate a boosted segment signal, an encoder coupled to the chest piece assembly and to the first low frequency boost circuit and responsive to the first analog auscultation signal and the boosted segment signal to generate a compressed digital auscultation signal.

15. The stethoscope unit according to claim 14, further including a headset and a receiving section; the receiving section further includes a decoder coupled to the encoder and responsive to the digital auscultation signal to generate a second analog auscultation signal; and the receiving section includes a second low frequency boost circuit and a low pass filter both coupled between the decoder and the headset.

16. The stethoscope system according to claim 15, wherein the receiving section further includes a switch having an output coupled to the headset and being operable to select an input from a diaphragm input terminal or a bell input terminal; the second low frequency boost circuit and low pass filter both being coupled between the bell input terminal and the output of the decoder; and the output of the decoder being coupled to the diaphragm input terminal.

17. The stethoscope system according to claim 16, wherein the encoder comprises a codec integrated circuit, with the codec integrated circuit having a first operating frequency range and including scaling means for scaling down the first operating frequency range to provide a second frequency range having a low frequency at least as low as 75 Hz and a high frequency at least as high as 550 Hz.

18. The stethoscope system according to claim 17, wherein the encoder is an adaptive delta modulation (ADM) and continuously variable slope delta (CVSD) modulation encoder.

19. The stethoscope system according to claim 18, wherein the transmitting section includes an asynchronous data communications interface coupled to the encoder and a clock system having a clock source and a clock divider coupled to the clock source to generate a line rate clock and a data rate clock and wherein the transmitting section has a low speed asynchronous line interface rate of 9,600 bits per second driven by the line rate clock and a data rate of 7,680 bits per second driven by the data rate clock.

20. The stethoscope system according to claim 18, wherein the local transmitting section includes a synchronous data communications interface coupled between the encoder with a data rate of the digital auscultation signal being equal to a line rate.

21. A stethoscope system, comprising:

- a local stethoscope unit including a local transmitting section and a local receiving section, with the local stethoscope unit having a local transmit mode and a local receive mode;

- a remote stethoscope unit including a remote transmitting section and a remote receiving section, with the remote stethoscope unit having a remote transmit mode and a remote receive mode;

- a chest piece assembly detachably coupled to the local transmitting section to generate an analog auscultation signal;

- the local stethoscope unit being configured to operate in the local transmit mode and the remote stethoscope unit being configured to operate in the remote receive mode in response the chest piece assembly being coupled to the local transmitting section and not coupled the remote transmitting section;

- the local transmitting section in the transmit mode being coupled to the remote receiving section and the chest piece assembly and being responsive to the analog auscultation signal to generate and transmit a digital auscultation signal to the remote receiving section;

- the remote receiving section in the receive mode being responsive to the transmitted digital auscultation signal to regenerate the analog auscultation signal; and

- a remote headset to receive the regenerated analog auscultation signal.

22. The stethoscope system according to claim 21, wherein the local stethoscope unit further includes a local headset coupled to the local receiving section to receive the digital auscultation signal.

23. The stethoscope system according to claim 21, wherein the local stethoscope unit further includes a local headset coupled to the chest piece assembly to receive the analog auscultation sound.

24. The stethoscope system according to claim 21, wherein the remote transmitting section, remote receiving section, and remote headset and the local transmitting section, local receiving section and local headset respectively are identical in design.

25. The stethoscope system according to claim 21, wherein the local transmitting section is coupled to the remote receiving section by way of a data communications channel.

26. The stethoscope system according to claim 21, wherein the local and remote transmitting section each include a chest piece detector to automatically trigger the transmit mode in response to detecting the presence of the chest piece assembly and to

automatically trigger the receive mode in response to not detecting the presence of the chest piece assembly.